CLMPTO

09/13/05

Claim 1 (currently amended): An optical monitoring apparatus for use in a wavelength division multiplexing network for monitoring a wavelength division multiplexing (WDM) signal in a network system, comprising:

a pump laser;

a WDM coupler for coupling said WDM signal and said pump laser;

an erbium-doped fiber, that is 6 meters in length or less, receiving said WDM signal and said pump laser transmitted from said WDM signal, and scanning gain profile of said WDM signal;

a saturated tone light source for controlling said gain profile of said WDM signal; and

an optical circulator coupled with said erbium-doped fiber, receiving said saturated tone light source, and subsequently outputting an output signal with a specified frequency.

Claim 2 (original): The optical monitoring apparatus for use in a wavelength division multiplexing network according to claim 1 further comprising an optical isolator for blocking light reflected back to said network system.

Claim 3 (original): The optical monitoring apparatus for use in a wavelength division multiplexing network according to claim 1 further comprising a power meter downstream of said optical circulator for power measurement.

Claim 4 (original): The optical monitoring apparatus for use in a wavelength division multiplexing network according to claim 1, wherein said pump laser has a wavelength of 980 nm.

Claim 5 (original): The optical monitoring apparatus for use in a wavelength division multiplexing network according to claim 1, wherein the operating wavelength of said WDM signal ranges from 1534.25 nm to 1558.98.

Cancelled claim 6

Claim 7 (original): The optical monitoring apparatus for use in a wavelength division multiplexing network according to claim 1, wherein said gain profile comprises gain or loss profile.